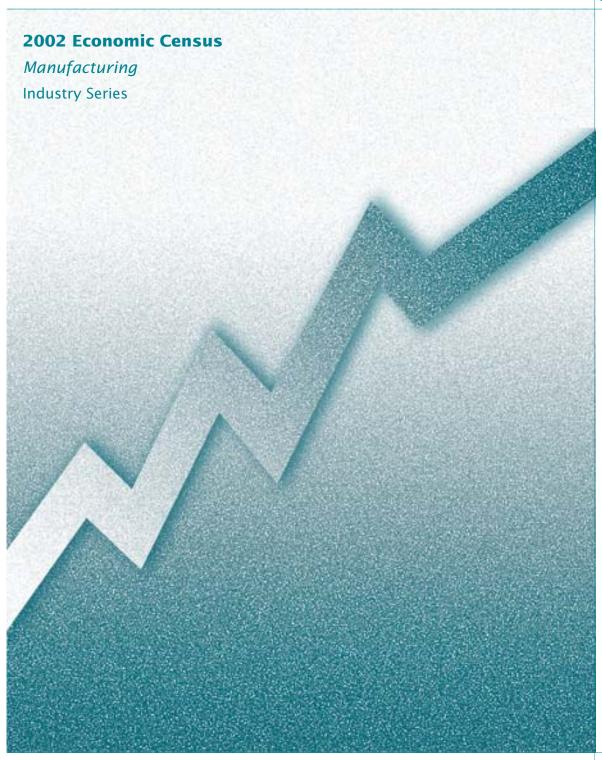
Corrugated and Solid Fiber Box Manufacturing: 2002

Issued December 2004

EC02-311-322211 (RV)





Helping You Make Informed Decisions

U.S. Department of Commerce Economics and Statistics Administration U.S. CENSUS BUREAU



CONTENTS

	duction to the Economic Census	v ix
Table	es	
1. 2. 3. 4. 5. 6a. 6b. 7.	Historical Statistics for the Industry: 2002 and Earlier Years Industry Statistics for Selected States: 2002 Detailed Statistics by Industry: 2002 Industry Statistics by Employment Size: 2002 Industry Statistics by Primary Product Class Specialization: 2002 Products Statistics: 2002 and 1997 Product Class Shipments for Selected States: 2002 and 1997 Materials Consumed by Kind: 2002 and 1997	1 2 3 4 5 6
Appe	endixes	
A. B. C. D. E. F.	Explanation of Terms	A-1 B-1 C-1 F-1

-- Not applicable for this report.

Table 1. Historical Statistics for the Industry: 2002 and Earlier Years

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

		All			Production workers				Total	Total	Total capital
Industry and year ¹	Com- panies ²	estab- lish- ments ³	Number ⁴	Payroll (\$1,000)	Number ⁴	Hours (1,000)	Wages (\$1,000)	Value added (\$1,000)	cost of materials (\$1,000)	value of shipments (\$1,000)	expendi- tures (\$1,000)
322211, Corrugated and solid fiber box											
manufacturing	955	1 719	117 079	4 631 854	85 893	180 546	2 770 299	10 957 221	18 505 428	29 514 919	r819 301
2001	N	N	131 225	4 913 921	97 198	202 360	2 907 205	11 196 572	20 227 342	31 473 077	899 933
2000	N	N	134 341	4 909 083	99 444	207 443	2 944 779	11 566 898	21 566 315	33 053 266	868 656
1999	N	N	132 517	4 799 280	97 276	206 589	2 893 637	10 861 383	18 864 009	29 617 530	817 886
1998	N	N	129 387	4 475 762	94 936	199 595	2 735 247	10 245 283	18 077 144	28 292 507	958 718
1997	995	1 733	124 641	4 260 630	91 401	190 936	2 576 043	9 627 993	15 950 040	25 555 136	966 285

¹Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

²For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

³Includes establishments with payroll at any time during the year.

⁴Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 2. Industry Statistics for Selected States: 2002

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by *, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

		All establ	Il establishments ² All e		nployees		oduction wor	kers				
Industry and geographic area	E¹	Total	With 20 em- ploy- ees or more	Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)	Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)
322211, Corrugated and solid fiber box manufacturing												
United States. Arkansas California Colorado Connecticut Florida Georgia Illinois Indiana Kansas Kentucky	- - 2 - 1 1 - -	1 719 28 172 13 26 46 58 116 62 9	1 201 18 120 8 17 23 38 85 45 7 26	117 079 1 956 12 182 951 1 318 2 549 4 147 7 812 4 807 1 324 2 320	4 631 854 65 488 535 957 40 312 57 222 101 098 169 560 319 251 185 628 49 528 81 980	85 893 1 533 9 051 724 899 1 914 3 050 5 740 3 522 870 1 777	180 546 3 112 19 522 1 414 1 935 4 155 6 469 12 291 7 018 1 934 3 637	2 770 299 41 894 338 878 25 825 29 750 62 616 100 288 190 930 113 251 29 921 51 402	10 957 221 162 258 1 236 257 82 472 121 220 219 982 389 839 795 848 452 122 90 601 204 753	18 505 428 335 097 2 421 220 140 600 160 172 492 423 768 959 1 253 588 666 493 153 725 322 479	29 514 919 494 032 3 736 388 224 303 280 527 713 980 1 156 668 2 048 219 1 113 667 243 784 516 955	'819 301 '27 350 '122 310 '5 177 '4 867 '13 994 '50 028 '49 509 '21 784 '7 445 '16 185
Louisiana Massachusetts Michigan. Minnesota Mississippi Missouri Nebraska New Jersey New York North Carolina	- 1 1 - 1 1 - 1 1	12 46 80 40 22 48 6 64 80 64	8 32 54 30 16 34 5 35 52	1 051 2 671 4 927 3 397 1 557 3 233 461 3 682 4 386 5 196	41 286 109 089 175 507 130 643 59 247 123 432 18 411 169 374 167 678 187 429	847 1 905 3 600 2 468 1 195 2 374 345 2 530 3 179 3 740	1 869 3 964 7 100 5 104 2 572 5 145 727 5 360 6 757 7 562	27 279 62 730 101 188 80 833 36 677 74 057 10 744 86 442 95 774 108 539	107 658 250 136 404 938 286 823 141 289 293 484 46 449 380 272 398 255 542 438	161 781 374 863 610 762 487 232 248 220 540 440 91 545 521 996 571 229 753 423	272 184 625 496 1 015 855 766 064 388 096 841 112 138 007 903 241 967 871 1 294 994	r5 101 r16 264 r25 505 r13 693 r11 032 r20 088 r7 229 r15 680 r27 217 r36 773
Ohio Pennsylvania South Carolina Texas Utah Virginia Washington Wisconsin	1 - 1 - 1	131 99 31 112 8 37 23 53	87 76 25 74 6 27 21 37	7 692 7 329 2 341 7 234 629 2 587 2 214 4 380	303 160 302 911 83 902 268 070 24 889 107 697 83 952 182 223	5 582 5 289 1 766 5 310 432 1 964 1 629 3 099	12 032 11 108 3 838 10 771 873 4 369 3 254 6 369	179 498 170 774 49 947 156 988 14 311 66 966 56 410 108 161	748 065 724 423 220 640 629 819 60 515 246 407 162 427 458 126	1 207 716 1 036 453 336 573 1 159 386 117 077 399 551 420 525 657 375	1 958 388 1 759 196 556 472 1 788 087 177 756 645 863 583 569 1 113 828	r43 566 r57 724 r29 571 r31 281 r7 989 r14 812 r8 272 r29 423

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

¹Includes establishments with payroll at any time during the year.

³Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

Detailed Statistics by Industry: 2002

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

ltem	Value
322211, Corrugated and solid fiber box manufacturing	
Companies ¹ number.	955
All establishments ²	1 719 518 711 490
All employees3 number. Total compensation \$1,000 Annual payroll \$1,000 Total fringe benefits \$1,000	117 079 5 786 549 4 631 854 1 154 695
Production workers, average for year	85 893 86 119 86 139 85 842 85 171
Production worker hours	180 546 2 770 299
Total cost of materials \$1,000. Materials, parts, containers, packaging, etc., used \$1,000. Resales \$1,000. Purchased fuels \$1,000. Purchased electricity \$1,000. Contract work \$1,000.	18 505 428 17 092 335 849 860 174 234 254 680 134 319
Quantity of electricity purchased for heat and power	3 900 843 D
Total value of shipments \$1,000 Primary products value of shipments \$1,000 Secondary products value of shipments \$1,000 Total miscellaneous receipts \$1,000 Value of resales \$1,000 Contract receipts \$1,000 Other miscellaneous receipts \$1,000	29 514 919 27 654 978 674 990 1 185 851 979 033 28 250 178 568
Primary products specialization ratio percent. Value of primary products shipments made in all industries \$1,000. Value of primary products shipments made in this industry \$1,000. Value of primary products shipments made in other industries \$1,000.	98 27 898 479 27 654 978 243 501
Coverage ratiopercent.	99
Value added\$1,000	10 957 221
Total inventories, beginning of year \$1,000. Finished goods inventories \$1,000 Work-in-process inventories \$1,000 Materials and supplies inventories \$1,000	2 679 398 744 316 133 857 1 801 225
Total inventories, end of year \$1,000. Finished goods inventories \$1,000. Work-in-process inventories \$1,000. Materials and supplies inventories \$1,000.	2 429 192 704 698 121 205 1 603 289
Gross value of depreciable assets (acquisition costs) at beginning of year \$1,000 Total capital expenditures (new and used) \$1,000 Buildings and other structures (new and used) \$1,000 Machinery and equipment (new and used) \$1,000 Automobiles, trucks, etc., for highway use \$1,000 Computers and peripheral data processing equipment \$1,000 All other expenditures for machinery and equipment \$1,000 Total retirements \$1,000 Gross value of depreciable assets at end of year \$1,000	'12 997 867 '819 301 '1113 314 '705 987 '25 366 '34 678 '645 943 '458 789 '13 358 379
Depreciation charges during year\$1,000	⁷ 850 911
Total rental payments \$1,000. Buildings and other structures \$1,000. Machinery and equipment \$1,000.	447 508 281 971 165 537
Total other expenses ⁴ \$1,000. Response coverage ratio ⁵ percent Repair and maintenance services of buildings and/or machinery ⁴ \$1,000. Communications services ⁴ \$1,000. Legal services ⁴ \$1,000. Accounting, auditing, and bookkeeping services ⁴ \$1,000. Advertising and promotional services ⁴ \$1,000. Expensed computer hardware and supplies and purchased computer services ⁴ \$1,000. Refuse removal (including hazardous waste) services ⁴ \$1,000. Management consulting and administrative services ⁴ \$1,000. Taxes and license fees ⁴ \$1,000. All other expenses ⁴ \$1,000.	1 555 213 90 303 119 54 294 16 559 17 472 66 007 27 755 22 227 26 239 142 188 879 352

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
2Includes establishments with payroll at any time during the year.
3Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.
4Based on Annual Survey of Manufactures (ASM) sample data.
5A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 4. Industry Statistics by Employment Size: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class		All employees			Pr	oduction worke	rs		Total	Total	Total capital
		All estab- lish- ments ²	Number ³	Payroll (\$1,000)	Number ³	Hours (1,000)	Wages (\$1,000)	Value added (\$1,000)	cost of materials (\$1,000)	value of shipments (\$1,000)	expendi- tures (\$1,000)
322211, Corrugated and solid fiber box manufacturing											
All establishments Establishments with — 1 to 4 employees 5 to 9 employees 10 to 19 employees 20 to 49 employees 5 to 99 employees 50 to 99 employees 250 to 499 employees 250 to 499 employees 500 to 999 employees 1,000 to 2,499 employees 1,000 to 2,499 employees 2,500 employees or more	9 8 7 1 1 - -	1 719 170 144 204 382 329 461 25 3	117 079 376 1 010 2 867 13 135 23 605 65 836 7 578 9	4 631 854 13 718 38 451 115 048 486 336 907 099 2 687 219 294 873 D	85 893 281 758 2 112 9 090 16 875 49 555 5 509 D	180 546 548 1 550 4 446 18 868 35 394 105 332 11 128 D	8 730 24 071 69 683 257 920 511 960 1 670 866 177 946 D	30 396 90 597 276 160 1 168 933 2 191 057 6 242 008 730 921 D D	18 505 428 64 087 186 850 504 860 1 682 408 3 571 032 11 410 112 825 087 D	29 514 919 95 848 277 539 780 212 2 847 817 5 751 276 17 724 705 1 550 124 D D	'819 301 '2 401 '8 828 '25 672 '106 804 '190 751 '425 199 '39 367 D
Administrative records ⁴	9	389	3 128	123 714	2 384	5 035	80 505	276 022	613 937	889 206	^r 19 035

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

¹Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

⁴Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 5. Industry Statistics by Primary Product Class Specialization: 2002

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All	All employees		Pr	oduction work	ers		Total	Total	Total capital
		estab- lish- ments ¹	Number ²	Payroll (\$1,000)	Number ²	Hours (1,000)	Wages (\$1,000)	Value added (\$1,000)	cost of materials (\$1,000)	value of shipments (\$1,000)	expendi- tures (\$1,000)
322211	Corrugated and solid fiber box manufacturing	1 719	117 079	4 631 854	85 893	180 546	2 770 299	10 957 221	18 505 428	29 514 919	r819 301
3222110	Corrugated and solid fiber boxes, including pallets	1 719	117 079	4 631 854	85 893	180 546	2 770 299	10 957 221	18 505 428	29 514 919	r819 301

¹Includes establishments with payroll at any time during the year.

²Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6a. Products Statistics: 2002 and 1997

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

		Number of	-	Product	shipments
Product code	Product	companies with shipments of \$100,000 or more	Quantity of production for all purposes	Quantity	Value (\$1,000)
322211	Corrugated and solid fiber box manufacturing	N N	X X	X	27 898 479 24 075 306
3222110	Corrugated and solid fiber boxes, including pallets	N N	X X	X X	27 898 479 24 075 306
32221101	Corrugated shipping containers for food and beverages and carryout boxes for retail food	N	x	×	6 391 827
3222110111	1997 Corrugated shipping containers for food and beveragesmil sq ft2002.	N 162	X X X X	P118 157.0	5 503 790 5 811 875
3222110114	1997 Corrugated carryout boxes for retail food	207 45 63	X	P119 535.0 S 98 721.9	5 100 492 579 952 403 298
32221102	Corrugated shipping containers for paper and allied products	N N	X	X X	1 860 496 2 293 320
3222110221	Corrugated shipping containers for paper and allied products	146	x	⁹ 36 519.5	1 860 496
32221103	Corrugated shipping containers for metal and electrical machinery, equipment, supplies, products, and appliances	209 N	X X	P51 061.8	2 293 320 2 276 371
3222110341	Corrugated shipping containers for metal products, machinery, equipment, and supplies, except electrical mil sq ft	N 175	X X	X	2 261 142 1 214 232
3222110345	1997 Corrugated shipping containers for electrical machinery.	242	X	919 292.5	1 297 515
00004404	equipment, supplies, and appliances	146 194	X	914 190.0	1 062 139 963 627
32221104 3222110431	Other corrugated shipping containers for all other end uses	N N	X X	X X	5 436 401 6 655 483
3222110431	products	77 115	X	⁹ 6 168.0 12 196.2	319 737 565 839
3222110433	Corrugated shipping containers for chemicals and drugs, including paints, varnishes, cosmetics, and soaps mil sq ft 2002	109 168	X	S 917 705.3	771 152 923 363
3222110435	Corrugated shipping containers for lumber and wood products, including furniture	105	x	s	537 012
3222110437	Corrugated shipping containers for all other end uses	164	X	911 913.9	679 856
32221105	(leather, rubber, plastics, petroleum, etc.)	168 260 N	X X X	X X X	3 808 500 4 486 425 3 007 927
32221105	Corrugated paperboard in sheets and rolls, lined and	N N	x	x x	2 281 883
0222110001	unlined	112 97	X X	X X	3 007 927 2 281 883
32221106	Other corrugated and solid fiber products, including containers, pallets, pads, partitions, point-of-purchase		v	V	0.004.040
3222110661	displays, etc. 2002. 1997. 1997. Corrugated solid fiber containers 2002.	N N 55	X X X X X	X X X	6 201 918 2 361 850 687 579
3222110665	1997 Corrugated and solid fiber pallets, pads, and partitions	51 114	X	X X X X	429 938 2 762 096
3222110691	Other corrugated and solid fiber products, including point-	136			597 084
3222110Y	of-purchase displays, etc	176 184 N	X X X	X X X	2 752 243 1 334 828 2 723 539
32221101 3222110YWW	Corrugated and solid fiber boxes, including pallets, nsk, for	N N	x	,	2 717 838
	nonadministrative-record establishments	N N	X X	X X	1 852 140 2 194 725
3222110YWY	Corrugated and solid fiber boxes, including pallets, nsk, for administrative-record establishments	N N	X	X	871 399 523 113

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

Table 6b. Product Class Shipments for Selected States: 2002 and 1997

[Not applicable for this report.]

Table 7. Materials Consumed by Kind: 2002 and 1997

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
322211	Corrugated and solid fiber box manufacturing		_
00900001	Total materials	X	17 092 335
32210005	Paper and paperboard (excluding boxes and containers)	X	14 787 277 13 341 677
32610021	Fabricated plastics products (including closures, ends, film, strapping, etc.)	P32 394.3 X X	11 407 691 117 081 125 333
33120016	Steel sheet and strip (including tinplate)	X	D
33131503	1997	X	N D
33211500	Metal closures and crowns for containers	X X X	2 941 1 438
32410009	Petroleum wax	S	76 264
32552002	1997 Glues and adhesives	9346.2 X	120 360 277 000
32591003	Printing inks	X S S	N 140 625 153 719
00970099	All other materials and components, parts, containers, and supplies	×	1 248 641
00971000	Materials, ingredients, containers, and supplies, nsk	X X X	1 869 912 1 913 450

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.